

## SEQUENCE LISTING

&lt;110&gt; Xiaoling Xie

<120> CRYSTAL STRUCTURES OF JNK-INHIBITOR COMPLEXES AND  
BINDING POCKETS THEREOF

&lt;130&gt; VPI/02-01

&lt;140&gt;

&lt;141&gt;

&lt;150&gt; 60/348,002

&lt;151&gt; 2002-01-11

&lt;160&gt; 7

&lt;170&gt; PatentIn Ver. 2.1

&lt;210&gt; 1

&lt;211&gt; 422

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1

Met Ser Leu His Phe Leu Tyr Tyr Cys Ser Glu Pro Thr Leu Asp Val  
1 5 10 15Lys Ile Ala Phe Cys Gln Gly Phe Asp Lys Gln Val Asp Val Ser Tyr  
20 25 30Ile Ala Lys His Tyr Asn Met Ser Lys Ser Lys Val Asp Asn Gln Phe  
35 40 45Tyr Ser Val Glu Val Gly Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr  
50 55 60Gln Asn Leu Lys Pro Ile Gly Ser Gly Ala Gln Gly Ile Val Cys Ala  
65 70 75 80Ala Tyr Asp Ala Val Leu Asp Arg Asn Val Ala Ile Lys Lys Leu Ser  
85 90 95Arg Pro Phe Gln Asn Gln Thr His Ala Lys Arg Ala Tyr Arg Glu Leu  
100 105 110Val Leu Met Lys Cys Val Asn His Lys Asn Ile Ile Ser Leu Leu Asn  
115 120 125Val Phe Thr Pro Gln Lys Thr Leu Glu Glu Phe Gln Asp Val Tyr Leu  
130 135 140Val Met Glu Leu Met Asp Ala Asn Leu Cys Gln Val Ile Gln Met Glu  
145 150 155 160Leu Asp His Glu Arg Met Ser Tyr Leu Leu Tyr Gln Met Leu Cys Gly  
165 170 175Ile Lys His Leu His Ser Ala Gly Ile Ile His Arg Asp Leu Lys Pro  
180 185 190Ser Asn Ile Val Val Lys Ser Asp Cys Thr Leu Lys Ile Leu Asp Phe  
195 200 205

Gly Leu Ala Arg Thr Ala Gly Thr Ser Phe Met Met Thr Pro Tyr Val  
 210 215 220  
 Val Thr Arg Tyr Tyr Arg Ala Pro Glu Val Ile Leu Gly Met Gly Tyr  
 225 230 235 240  
 Lys Glu Asn Val Asp Ile Trp Ser Val Gly Cys Ile Met Gly Glu Met  
 245 250 255  
 Val Arg His Lys Ile Leu Phe Pro Gly Arg Asp Tyr Ile Asp Gln Trp  
 260 265 270  
 Asn Lys Val Ile Glu Gln Leu Gly Thr Pro Cys Pro Glu Phe Met Lys  
 275 280 285  
 Lys Leu Gln Pro Thr Val Arg Asn Tyr Val Glu Asn Arg Pro Lys Tyr  
 290 295 300  
 Ala Gly Leu Thr Phe Pro Lys Leu Phe Pro Asp Ser Leu Phe Pro Ala  
 305 310 315 320  
 Asp Ser Glu His Asn Lys Leu Lys Ala Ser Gln Ala Arg Asp Leu Leu  
 325 330 335  
 Ser Lys Met Leu Val Ile Asp Pro Ala Lys Arg Ile Ser Val Asp Asp  
 340 345 350  
 Ala Leu Gln His Pro Tyr Ile Asn Val Trp Tyr Asp Pro Ala Glu Val  
 355 360 365  
 Glu Ala Pro Pro Pro Gln Ile Tyr Asp Lys Gln Leu Asp Glu Arg Glu  
 370 375 380  
 His Thr Ile Glu Glu Trp Lys Glu Leu Ile Tyr Lys Glu Val Met Asn  
 385 390 395 400  
 Ser Glu Glu Lys Thr Lys Asn Gly Val Val Lys Gly Gln Pro Ser Pro  
 405 410 415  
 Ser Ala Gln Val Gln Gln  
 420

<210> 2  
 <211> 340  
 <212> PRT  
 <213> Homo sapiens

<400> 2  
 Phe Tyr Arg Gln Glu Leu Asn Lys Thr Ile Trp Glu Val Pro Glu Arg  
 1 5 10 15  
 Tyr Gln Asn Leu Ser Pro Val Gly Ser Gly Ala Tyr Gly Ser Val Cys  
 20 25 30  
 Ala Ala Phe Asp Thr Lys Thr Gly Leu Arg Val Ala Val Lys Lys Leu  
 35 40 45  
 Ser Arg Pro Phe Gln Ser Ile Ile His Ala Lys Arg Thr Tyr Arg Glu  
 50 55 60  
 Leu Arg Leu Leu Lys His Met Lys His Glu Asn Val Ile Gly Leu Leu  
 65 70 75 80

Asp Val Phe Thr Pro Ala Arg Ser Leu Glu Glu Phe Asn Asp Val Tyr  
                             85                            90                            95  
 Leu Val Thr His Leu Met Gly Ala Asp Leu Asn Asn Ile Val Lys Cys  
                             100                            105                            110  
 Gln Lys Leu Thr Asp Asp His Val Gln Phe Leu Ile Tyr Gln Ile Leu  
                             115                            120                            125  
 Arg Gly Leu Lys Tyr Ile His Ser Ala Asp Ile Ile His Arg Asp Leu  
                             130                            135                            140  
 Lys Pro Ser Asn Leu Ala Val Asn Glu Asp Cys Glu Leu Lys Ile Leu  
                             145                            150                            155                            160  
 Asp Phe Gly Leu Ala Arg His Thr Asp Asp Glu Met Thr Gly Tyr Val  
                             165                            170                            175  
 Ala Thr Arg Trp Tyr Arg Ala Pro Glu Ile Met Leu Asn Trp Met His  
                             180                            185                            190  
 Tyr Asn Gln Thr Val Asp Ile Trp Ser Val Gly Cys Ile Met Ala Glu  
                             195                            200                            205  
 Leu Leu Thr Gly Arg Thr Leu Phe Pro Gly Thr Asp His Ile Asp Gln  
                             210                            215                            220  
 Leu Lys Leu Ile Leu Arg Leu Val Gly Thr Pro Gly Ala Glu Leu Leu  
                             225                            230                            235                            240  
 Lys Lys Ile Ser Ser Glu Ser Ala Arg Asn Tyr Ile Gln Ser Leu Thr  
                             245                            250                            255  
 Gln Met Pro Lys Met Asn Phe Ala Asn Val Phe Ile Gly Ala Asn Pro  
                             260                            265                            270  
 Leu Ala Val Asp Leu Leu Glu Lys Met Leu Val Leu Asp Ser Asp Lys  
                             275                            280                            285  
 Arg Ile Thr Ala Ala Gln Ala Leu Ala His Ala Tyr Phe Ala Gln Tyr  
                             290                            295                            300  
 His Asp Pro Asp Asp Glu Pro Val Ala Asp Pro Tyr Asp Gln Ser Phe  
                             305                            310                            315                            320  
 Glu Ser Arg Asp Leu Leu Ile Asp Glu Trp Lys Ser Leu Thr Tyr Asp  
                             325                            330                            335  
 Glu Val Ile Ser  
                             340

<210> 3  
 <211> 342  
 <212> PRT  
 <213> Homo sapiens

<400> 3  
 Ala Gly Pro Glu Met Val Arg Gly Gln Val Phe Asp Val Gly Pro Arg  
   1                            5                            10                            15  
 Tyr Thr Asn Leu Ser Tyr Ile Gly Glu Gly Ala Tyr Gly Met Val Cys  
                             20                            25                            30

Ser Ala Tyr Asp Asn Val Asn Lys Val Arg Val Ala Ile Lys Lys Ile  
 35 40 45  
 Ser Pro Phe Glu His Gln Thr Tyr Cys Gln Arg Thr Leu Arg Glu Ile  
 50 55 60  
 Lys Ile Leu Leu Arg Phe Arg His Glu Asn Ile Ile Gly Ile Asn Asp  
 65 70 75 80  
 Ile Ile Arg Ala Pro Thr Ile Glu Gln Met Lys Asp Val Tyr Ile Val  
 85 90 95  
 Gln Asp Leu Met Glu Thr Asp Leu Tyr Lys Leu Leu Lys Thr Gln His  
 100 105 110  
 Leu Ser Asn Asp His Ile Cys Tyr Phe Leu Tyr Gln Ile Leu Arg Gly  
 115 120 125  
 Leu Lys Tyr Ile His Ser Ala Asn Val Leu His Arg Asp Leu Lys Pro  
 130 135 140  
 Ser Asn Leu Leu Leu Asn Thr Thr Cys Asp Leu Lys Ile Cys Asp Phe  
 145 150 155 160  
 Gly Leu Ala Arg Val Ala Asp Pro Asp His Asp His Thr Gly Phe Leu  
 165 170 175  
 Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala Pro Glu Ile Met Leu  
 180 185 190  
 Asn Ser Lys Gly Tyr Thr Lys Ser Ile Asp Ile Trp Ser Val Gly Cys  
 195 200 205  
 Ile Leu Ala Glu Met Leu Ser Asn Arg Pro Ile Phe Pro Gly Lys His  
 210 215 220  
 Tyr Leu Asp Gln Leu Lys His Ile Leu Gly Ile Leu Gly Ser Pro Ser  
 225 230 235 240  
 Gln Glu Asp Leu Asn Cys Ile Ile Asn Leu Lys Ala Arg Asn Tyr Leu  
 245 250 255  
 Leu Ser Leu Pro His Lys Asn Lys Val Pro Trp Asn Arg Leu Phe Pro  
 260 265 270  
 Asn Ala Asp Ser Lys Ala Leu Asp Leu Leu Asp Lys Met Leu Thr Phe  
 275 280 285  
 Asn Pro His Lys Arg Ile Glu Val Glu Gln Ala Leu Ala His Pro Tyr  
 290 295 300  
 Leu Glu Gln Tyr Tyr Asp Pro Ser Asp Glu Pro Ile Ala Glu Ala Pro  
 305 310 315 320  
 Phe Lys Phe Asp Met Glu Leu Asp Asp Leu Pro Lys Glu Lys Leu Lys  
 325 330 335  
 Glu Leu Ile Phe Glu Glu  
 340

<210> 4  
 <211> 256  
 <212> PRT

<213> Mus musculus

<400> 4

Asp Gln Phe Asp Arg Ile Lys Thr Leu Gly Thr Gly Ser Phe Gly Arg  
1 5 10 15  
Val Met Leu Val Lys His Lys Glu Ser Gly Asn His Tyr Ala Met Lys  
20 25 30  
Ile Leu Asp Lys Gln Lys Val Val Lys Leu Lys Gln Ile Glu His Thr  
35 40 45  
Leu Asn Glu Lys Arg Ile Leu Gln Ala Val Asn Phe Pro Phe Leu Val  
50 55 60  
Lys Leu Glu Phe Ser Phe Lys Asp Asn Ser Asn Leu Tyr Met Val Met  
65 70 75 80  
Glu Tyr Val Ala Gly Gly Glu Met Phe Ser His Leu Arg Arg Ile Gly  
85 90 95  
Arg Phe Ser Glu Pro His Ala Arg Phe Tyr Ala Ala Gln Ile Val Leu  
100 105 110  
Thr Phe Glu Tyr Leu His Ser Leu Asp Leu Ile Tyr Arg Asp Leu Lys  
115 120 125  
Pro Glu Asn Leu Leu Ile Asp Gln Gln Gly Tyr Ile Gln Val Thr Asp  
130 135 140  
Phe Gly Phe Ala Lys Arg Val Lys Gly Arg Thr Trp Thr Leu Cys Gly  
145 150 155 160  
Thr Pro Glu Tyr Leu Ala Pro Glu Ile Ile Leu Ser Lys Gly Tyr Asn  
165 170 175  
Lys Ala Val Asp Trp Trp Ala Leu Gly Val Leu Ile Tyr Glu Met Ala  
180 185 190  
Ala Gly Tyr Pro Pro Phe Phe Ala Asp Gln Pro Ile Gln Ile Tyr Glu  
195 200 205  
Lys Ile Val Ser Gly Lys Val Arg Phe Pro Ser His Phe Ser Ser Asp  
210 215 220  
Leu Lys Asp Leu Leu Arg Asn Leu Leu Gln Val Asp Leu Thr Lys Arg  
225 230 235 240  
Phe Gly Asn Leu Lys Asp Gly Val Asn Asp Ile Lys Asn His Lys Trp  
245 250 255

<210> 5

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 5

gctctagagc tccatgggca gcaaaagcaa agttgacaa

39

<210> 6  
<211> 37  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 6  
tagcggatcc tcattctgaa ttcattactt ccttgta 37

<210> 7  
<211> 21  
<212> PRT  
<213> Homo sapiens

<400> 7  
Lys Arg Glu Leu Val Glu Pro Leu Thr Pro Ser Gly Glu Ala Pro Asn  
1 5 10 15  
Gln Ala Leu Leu Arg  
20